



Construction Selector

- Fire Ratings
- Acoustical Performance
- Product/System Index
- Specification Standards

for U.S.G. assemblies

**partitions
and walls**

**demountable
partitions**

**ceilings
and floors**

**structural
fireproofing**

This Construction Selector summarizes the many effective systems that can be constructed with United States Gypsum quality-tested building products. Complete technical information, organized for efficiency of use, is presented according to the end result desired by the architect, engineer or designer. Tested fire-resistance and acoustical performance for various assemblies are presented for initial comparison and selection of systems. This folder also serves as an index to the various systems and product folders in this series providing more complete data.

U.S.G.—over 80 years of serving building construction

Since the Company's founding in 1902, United States Gypsum has been a leader in the building industry. The Company offers a wide variety of quality products and performance-engineered systems to meet specialized requirements for modern building design. Strategically located plants produce and/or stock these building materials. Manufacture of these products to carefully controlled standards insures uniform quality. Evidence of this is the preference for U.S.G.'s products in the marketplace.

The U.S.G. Research Center, largest and most advanced in the industry, continually develops new products and high-performance systems. They are designed to provide improved function and utility while reducing construction time and cost. All are released only after thorough testing and field trial.

U.S.G. employs technical service and sales representatives to help design professionals gain maximum performance from materials and systems by advising on selection, proper detailing and specification. They may be reached through the nearest U.S.G. Sales office listed on page 24.

contents/U.S.G. technical information

The rapidly expanding technology of building makes it difficult for today's designer to remain abreast of all new developments in materials and construction systems. This technical literature program has a format best suited for architect's use—organized by function and end result—to save time in locating technical information and improve results. It is arranged for quick comparison of functional properties and separated to isolate concise data on each major U.S.G. construction system and product.

This Construction Selector is the first element and key reference index to the program. It summarizes fire-rated construction and acoustical performance data of system variations for quick comparison and selection. Cross-references give the System Folders having complete description, installation details and specifications. Product Catalogs provide technical data on components and accessories used in U.S.G. construction systems.

The table right gives the sequence of other folders comprising the complete series. Section identification is shown for folders located in Sweet's 1983 General Building File; those marked "O" appear in other Sweet's files. The numeral before each division title indicates the UCI Uniform System division classification. Copies of all folders listed are available through U.S.G. sales offices or by mail (in Sweet's, see Literature Directory following this Selector).

The System Folders and Building Product Catalogs are arranged in numerical sequence, at right. The first numeral in the title number is the appropriate division number (two digits for two-digit division numbers) so that folders are easily filed. Other appropriate folders are included with their respective numbers. All folders are new 1983 editions, except SA-1510 GLOBE STRUT Metal Framing which was new in 1982. If the folders in your U.S.G. binder are more than one year old, contact your U.S.G. sales office for a current set of replacement literature.

Folder description	Sweet's Sec. No.
Div. 5/Grating, Steel Framing	
SA-506 GRIP STRUT* Gratings	O
SA-510 Steel Framing Systems	5.3
Div. 7/Insulation	
SA-705 Building & Acoustical Insulation	7.14
SA-707 THERMAFIBER* Fire Safety Systems	7.14
SA-710 FOAMULAR* Extruded Polystyrene Insulation	7.14
Div. 8/Curtain Walls, Doors & Frames	
SA-815 CASTLEGATE* Insulated Steel Doors	O
SA-805 Exterior Curtain Walls	8.14
Div. 9/Acoustical Treatment	
SA-905 Sound Control Ceilings	9.1
Div. 9/Lath, Plaster	
SA-912 Steel-Framed Veneer Plaster Partitions/Ceilings	9.5
SA-913 Wood-Framed Veneer Finish Partitions/Ceilings	O
SA-915 Steel-Framed Gypsum Lath Partitions	9.5
SA-917 Plasters, Bases & Accessories	9.5
Div. 9/Gypsum Drywall	
SA-922 Cavity Shaft Wall Partitions	9.5
SA-923 Steel-Framed Gypsum Drywall Partitions/Ceilings	9.5
SA-924 Wood-Framed Gypsum Drywall Partitions/Ceilings	9.5
SA-925 Area Separation Walls	9.5
SA-927 Gypsum Panels & Accessories	9.5
Div. 9/Prefinished Panels	
SA-928 TEXTONE* Vinyl-Faced Gypsum Panels	9.12
Div. 9/Paints	
SA-933 Texture & Paint Products	9.5
Div. 10/Specialty Partitions	
SA-1020 ULTRAWALL* Movable	10.1
SA-1070 ACCURATE Toilet Partitions	10.7
SA-1080 ACCURATE Laminated Toilet Partitions	10.7
Div. 15/Mechanical	
SA-1510 GLOBE STRUT* Metal Framing
SA-1515 THERMAFIBER* Mechanical Insulation	O
Div. 16/Electrical	
SA-1610 GLOBETRAY* Cable Trays

*Reg. U.S. Pat. & Tm. Off.

Index/products and systems

product or system folder reference

A	
Accessories,	
structural & trim	SA-917, SA-927
Acoustical insulation	SA-705, SA-707, SA-1515
Acoustical sealant	SA-927
Acoustical tile, panels, space units	SA-905
Adhesives, drywall	SA-927
Aluminum foil-backed boards	SA-917, SA-927
Aluminum trim	SA-1020
Area separation walls	SA-925
ASTM Specs	page 23, SA-100
B	
Back-blocking system	SA-924
Basecoat plaster	SA-917
Block filler	SA-933
Boiler insulation	SA-1515
Brick veneer curtain walls	SA-805
Building insulation	SA-705, SA-710
C	
Cable tray systems	SA-1610
Caged beam construction	SA-912, SA-923
Catwalk grating	SA-506
Cavity shaft walls	SA-922
Cavity wall insulation	SA-710
Ceiling board, accessories	SA-905, SA-927
Ceiling grid systems	SA-905, SA-927
Ceiling heat components	SA-917
Ceiling texture finishes	SA-933
Channel framing	SA-1510
Channels, furring & lathing	SA-917, SA-927
Channels, resilient	SA-917, SA-927
Chase walls	SA-912, SA-915, SA-922, SA-923, SA-924
Coatings, masonry	SA-933
Column fireproofing	SA-707, SA-923
Compartments, toilet & shower	SA-1070, SA-1080
Concrete fasteners	SA-927
Concrete finishing compound	SA-917, SA-927
Concrete inserts	SA-1510
Control joints	SA-917, SA-927
Corner, casing beads	SA-917, SA-927
Curtain wall insulation	SA-707
Curtain walls	SA-805
D	
Demountable partitions	SA-1020
Door frames	SA-815, SA-1020
Doors, steel, fire-rated	SA-815
Drywall ceilings	SA-923, SA-924
Drywall fireproofing	SA-923
Drywall furring systems	SA-710, SA-805, SA-923, SA-1020
Drywall partitions, laminated	SA-922, SA-923, SA-924
Drywall partitions, steel framed	SA-922, SA-923, SA-925, SA-1020
Drywall partitions, wood-framed	SA-924, SA-925
E	
Electrical cable supports	SA-1610
Exterior curtain walls	SA-805
Exterior texture finish	SA-933
Exterior walls and ceilings	SA-510, SA-710, SA-805, SA-905, SA-924

product or system folder reference

F	
Federal Specs	page 23, SA-100
Finishing lime	SA-917
Fireproofing, mineral felt	SA-707
Fire-rated doors	SA-815
Fire safety systems	SA-707
Flame-resistant blankets	SA-705
Floating angle construction	SA-913, SA-924
Flooring, open steel	SA-505, SA-506
Flush doors	SA-815
Foam insulation	SA-710
Foil-back gypsum panels, lath	SA-917, SA-927
Foundation insulation	SA-710
Frames, door	SA-815, SA-1020
Framing, light-gauge steel	SA-510
Foil-back insulation	SA-705, SA-707, SA-1515
G	
Gauging plasters	SA-917
Glazed doors	SA-815
Grating, reticulated metal	SA-506
Gypsum coreboard	SA-927
Gypsum lath ceilings	SA-912, SA-913
Gypsum lath partitions	SA-912, SA-915, SA-922
Gypsum liner panels	SA-927
Gypsum panels	SA-927, SA-928
Gypsum plaster bases	SA-917
I	
Industrial insulation	SA-1515
Insulated steel doors	SA-815
Insulating blankets, mats	SA-705, SA-707, SA-1515
Insulating furring	SA-710, SA-912, SA-915, SA-923
Insulating gypsum panels, lath	SA-917, SA-927
Insulation, fire-containment	SA-707
Insulation, mechanical	SA-1515
Insulation, extruded polystyrene	SA-710
J	
Joint treatment	SA-927
Joists, load-bearing steel	SA-510
L	
Lathing accessories, clips	SA-917
Light fixture protection	SA-905
M	
Metal doors & frames	SA-815
Metal lath & accessories	SA-917
Metal stud partitions	SA-912, SA-915, SA-922, SA-923, SA-925, SA-1020
Metal studs	SA-510, SA-917, SA-927
Metal toilet components	SA-1070
Metal cable tray systems	SA-1610
Metal trim	SA-917, SA-927, SA-1020
Mineral fiber insulation	SA-705, SA-707, SA-1515
Mirrored ceiling panels	SA-905
Mouldings, drywall	SA-927, SA-928
Movable partitions	SA-1020

References listed are principal source of information in U.S.G. Architectural Technical Literature series. Repetition or additional data may occur in other folders.

product or system folder reference

P	
Paint products	SA-933
Partitions, toilet	SA-1070, SA-1080
Party walls	SA-510, SA-912, SA-923, SA-924, SA-1020
Perimeter insulation	SA-710
Plaster bases	SA-917
Plaster ceilings	SA-912, SA-913
Plaster furring systems	SA-912, SA-915
Plaster partitions, steel-framed	SA-912, SA-915, SA-922
Plaster partitions, wood-framed	SA-913
Plastering lime	SA-917
Plasters-basecoat, finish	SA-917
Plastic trim	SA-917, SA-927, SA-928
Poke-thru insulation	SA-707
Prefinished gypsum panels	SA-928
Primers & sealers	SA-933

R	
Radiant heat ceiling components	SA-917
Resilient ceilings	SA-913, SA-924
Resilient partitions	SA-913, SA-915, SA-922, SA-924, SA-925
Roof insulation	SA-710

S	
Safing insulation	SA-707
Screens, toilet compartment	SA-1070, SA-1080
Screws, gypsum board	SA-917, SA-927
Sealer, spray compound	SA-933
Separation walls	SA-925
Shaft wall partitions	SA-922
Sheathing, extruded polystyrene	SA-710
Sheathing, gypsum	SA-927
Shower compartments	SA-1070, SA-1080
Sidelights, door	SA-815
Sound attenuation blankets	SA-705, SA-1515
Space units, acoustical	SA-905
Stair treads	SA-506
Steel doors, frames	SA-815
Steel framing, load-bearing	SA-510
Steel studs	SA-510, SA-917, SA-927
Stucco	SA-805, SA-917

T	
Tape, reinforcing	SA-917, SA-927
Texture finishes	SA-933
Thermal entry doors	SA-815
Toilet partitions, accessories	SA-1070, SA-1080
Trim accessories	SA-917, SA-927

V	
Varnishes	SA-933
Veneer finishes	SA-917
Veneer plaster systems	SA-805, SA-912, SA-913, SA-922
Vent shaft construction	SA-922
Vinyl-faced gypsum panels	SA-928
Vinyl trim	SA-917, SA-927, SA-928

W	
Wallboard & accessories	SA-927
Wallcovering, vinyl	SA-928
Wall panels, prefinished	SA-928
Wood-frame partitions, ceilings	SA-913, SA-924, SA-925

How to use this selector

description of sections

This folder is divided into six sections—A to F—covering the categories indicated below. Within each section are listed brief analyses of major variations of each system, as documented by fire or sound tests, federal specifications or ASTM designations. They are arranged sequentially according to fire ratings—the criterion that most often governs selection.

These analyses are organized to locate the criteria desired at a glance. In Section A, covering fixed and demountable partitions, all information appears under five column headings:

fire-rated construction		acoustical performance		
detail & physical data	description & test no.	STC	description & test no.	folder reference

In section B—ceiling systems—headings are revised to show STC and IIC sound ratings. In sections C, D and E—structural fireproofing, exterior walls and wall furring—certain of these columns are not applicable and are omitted.

The analyses applicable to each system, as listed in the first five sections here, are repeated in the individual folder covering that system, indicated by number in the "Folder Reference" column. Full information, details and specifications on the selected constructions also are available in the folders. See contents, page 2, for folder locations.

- a partitions**—pages 5 to 10—include mechanically fastened and laminated assemblies, steel and wood-framed, load bearing and non-load bearing, fixed and demountable—in gypsum base and veneer finishes, gypsum drywall, and conventional lath and plaster.
- b ceilings**—pages 11 to 17—include suspended, furred and direct-attachment types, employing drywall, veneer finishes, conventional plaster and mineral fiber tile or panel surfaces with companion floor or roof construction.
- c structural fireproofing**—pages 18 and 19—shows basic methods of protecting columns and beams with gypsum base and veneer finishes, mineral fireproofing, and gypsum drywall.
- d exterior walls**—page 20—includes load-bearing wood and steel stud systems and exterior curtain wall assemblies.
- e exterior wall furring**—page 21—compares methods of furring exterior walls, including veneer and conventional plaster and drywall furring systems.
- f product catalogs**—listed and indexed on page 22—present complete data on components and accessories used in U.S.G. drywall and plaster construction systems. Other subjects: building and mechanical insulation, texture and paint products, prefabricated wall panels, sound control ceiling products, cable trays, gratings, metal channel framing, insulated steel doors and frames, metal and laminated plastic toilet compartments and screens.

Federal specification and ASTM designation qualifications of U.S.G. products are listed on page 23.

abbreviations

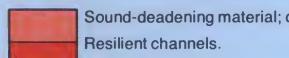
In the test analyses following, the abbreviation "est" indicates estimated; the abbreviation N/A indicates not applicable or not available. Other abbreviations are classified by columns where they appear:

description and comments

acoust	acoustical	insul	insulating or insulation
alum	aluminum	int	interior
appl	applied	lamin	laminated
att	attached	lbr	lumber
atten	attenuation	lightwt	lightweight
betw	between	lim	limiting
bd	board	met	metal
blkts	blankets	min	mineral or minimum
cem	cement	mov	movable
chan	channel	nom	nominal
clg	ceiling	noncomb	noncombustible
col	column	o.c.	on center
com	common	opp	opposite
conc	concrete	oz	ounce
contin	continuous	partn	partition
conv	conventional	perim	perimeter
corrug	corrugated	plywd	plywood
cr	cold rolled	prot	protected or protection
ctd	coated	qtr	quarter
dbl	double	recom	recommended
ea	each	reg	regular
exp	exposed	resil	resilient
extendg	extending	run	runner(s)
fin	finish or finished	sep	separate
fireprfg	fireproofing	separ	separated
fixt	fixture	stag	staggered
flr	floor	stl	steel
freq	frequency	subflr	subfloor
ft	foot or feet	susp	suspended or suspension
fur	furring	syst	system
ga	gauge	thickn	thickness
galv	galvanized	unfin	unfinished
hex	hexagonal	vert	vertically
horiz	horizontally	wd	wood
hr	hour	wt	weight (lb./sq. ft.)
ht	height		

Plaster mixes show plaster content by weight in lb., aggregates by volume in cu. ft.

In details, color background designates materials indicated below:



Sound-deadening material; column or beam fireproofing.



Resilient channels.



Furring channels.

test no.

noncomb	noncombustible	ASTM	Amer. Soc. Testing Materials
Des	Design	USG	United States Gypsum
GA	Gypsum Association		

The recognized laboratories which performed the tests are noted by abbreviation as follows:

Fire	Sound
UL—Underwriters Laboratories Inc.	TL—Riverbank Acoustical Laboratories
OSU—Ohio State University	G & H—Geiger & Hamme
U of C—University of California	CK—Cedar Knolis Acoust. Laboratories
WHI—Warnock Hersey International	BBN—Bolt, Beranek and Newman
CEG—Consulting Engineers Group	KSO—Kenward S. Oliphant
	KAL—Kodaritas Acoustical Laboratories
	SA—Shiner & Assoc.

sound rating

STC	sound transmission class per ASTM test procedures	IIC	impact insulation class per ASTM test procedures
clg. STC range	sound transmission class per AMA 1-II test procedure		

sound tests

Sound tests are conducted under ideal laboratory conditions per ASTM procedures. Comparable field performance depends on building design and careful attention to detailing and workmanship.

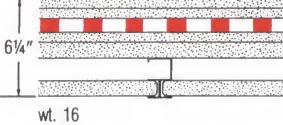
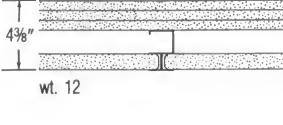
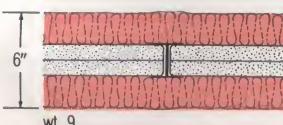
test certification

U.S.G. will provide test certification for published fire, sound and structural data covering systems designed and constructed according to its published specifications. Tests are conducted on U.S.G. products assembled to meet performance requirements of established test procedures specified by various agencies. System performance following any substitution of materials or compromise in assembly design cannot be certified and may result in failure under critical conditions.

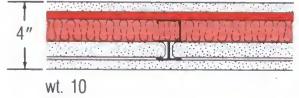
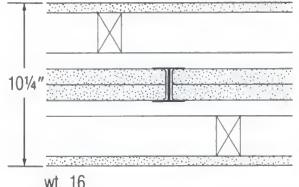
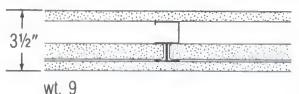
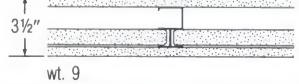
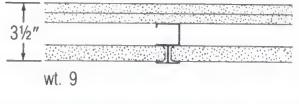
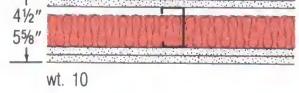
selector guide to sound-rated partitions⁽¹⁾

STC range	55-60	50-54	45-49	40-44	35-39
drywall assemblies	2, 3, 10, 15, 22, 23, 40, 50	8, 9, 10, 14, 20, 22, 23, 39, 40, 41, 51, 53, 54	10, 12, 13, 17, 19, 24, 42, 43, 48, 50, 51, 55, 56, 59, 60	41, 43, 47, 48, 59, 60	13, 44, 52
plaster assemblies	2	26, 27, 29, 35, 38	27, 28, 30, 31, 32, 33, 35	34	

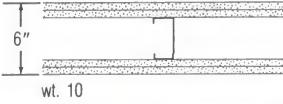
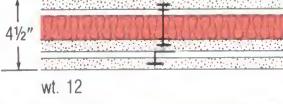
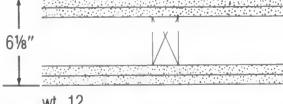
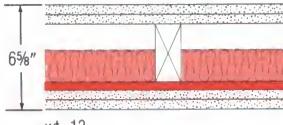
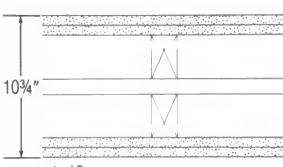
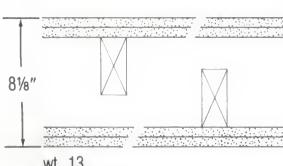
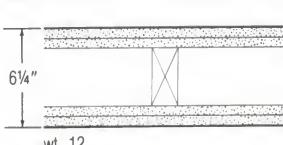
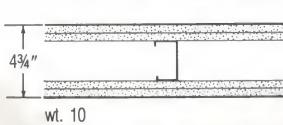
(1) Assemblies identified by numbers in outside margin, pp. 5 to 10.

fire-rated construction	detail & physical data	description & test no.	acoustical performance	folder reference
4-hour rated partitions				
	wt. 16	drywall steel-framed assembly—non-load bearing Cavity Shaft Wall Gypsum Drywall—2 layers $\frac{5}{8}$ " SHEETROCK brand FIRECODE "C" gypsum panels face side—1" USG shaft wall liner panels set betw USG steel C-H studs 24" o.c.—1" liner panels $\frac{5}{8}$ " gypsum panel core screw att to studs—horiz USG met fur chan 24" o.c.—face side panels screw att to fur chan—panels appl vert with joints stag—joints fin—est. fire rating based on U of C 5-24-74—rating also applies with IMPERIAL FIRECODE "C" Base and veneer finish surface	N/A	SA-922 1
	wt. 17	Steel Stud—4 layers $\frac{1}{2}$ " SHEETROCK brand FIRECODE "C" gypsum panels ea side— $\frac{1}{2}$ " USG studs 24" o.c.—base layers appl vert—face layer appl horiz—panels screw att with joints stag & fin—perimeter caulked—rating based on assembly with or without sound atten blankets—rating also applies with IMPERIAL FIRECODE "C" Base and veneer finish surface—UL Des U435	58	Based on assembly with 1 1/2" sound atten blankets in cavity— SA-820518 SA-912 SA-923 2
3-hour rated partitions				
	wt. 14	drywall steel-framed assemblies—non-load bearing Cavity Area Separation Wall— $\frac{5}{8}$ " SHEETROCK brand W/R FIRECODE "C" gypsum panels—1" USG gypsum liner panels set betw USG steel C-H Studs 24" o.c.—RC-1 chan 24" o.c. screw att to side opp liner panels—1 1/2" THERMAFIBER sound atten blks—single layer panels one side appl vert & screw att—2 layers opp side screw att to chan—base layer appl horiz—face layer appl vert—joints fin—perim caulked—est. fire rating based on U of C 2-16-72	57	BBN-730622 SA-925 3
	wt. 12	Cavity Shaft Wall Gypsum Drywall—3 layers $\frac{5}{8}$ " SHEETROCK brand FIRECODE "C" gypsum panels one side—1" USG shaft wall liner panels set betw USG steel C-H studs 24" o.c.—panels screw att to side opp liner panels with joints stag—base & face layers appl vert—mid layer appl horiz—joints fin—est. fire rating based on U of C 2-16-72—rating also applies with IMPERIAL FIRECODE "C" Base and veneer finish surface	N/A	SA-922 4
	wt. 15	Steel Stud—3 layers $\frac{1}{2}$ " SHEETROCK brand FIRECODE "C" gypsum panels ea side— $\frac{1}{2}$ " USG studs 24" o.c.—base layers appl vert—face layer appl horiz—panels screw att with joints stag & fin—perimeter caulked—rating based on assembly with or without sound atten blankets—rating also applies with IMPERIAL FIRECODE "C" Base and veneer finish surface—UL Des U435	N/A	SA-912 SA-923 5
	wt. 15	Steel Stud—3 layers $\frac{5}{8}$ " SHEETROCK brand FIRECODE "C" ea side—fireproofed steel truss—2 1/2" USG studs 24" o.c. in 2 rows spaced 8" apart— $\frac{5}{8}$ " gypsum panel gussets spanning chase att to stud at qtr points—panels appl vert & screw att—joints stag & fin—UL Des U805	N/A	SA-923 6
	wt. 9	Solid Area Separation Wall—two 1" gypsum liner panels set betw USG steel H-studs 24" o.c.—2" THERMAFIBER sound atten blks ea side—blks appl horiz with joints stag and staple-att to liner panels—WHI-495-0393/0394	N/A	SA-925 7

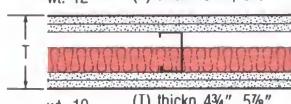
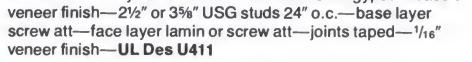
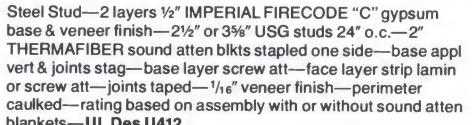
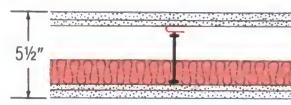
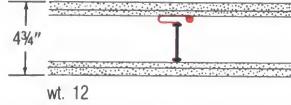
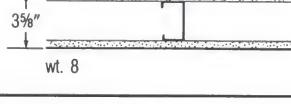
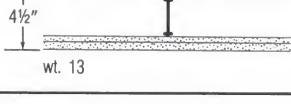
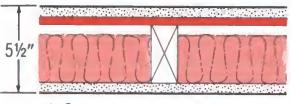
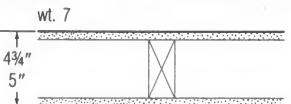
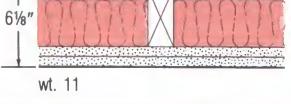
a partitions

fire-rated construction	detail & physical data	description & test no.	acoustical performance	folder reference
2-hour rated partitions		drywall steel-framed assemblies—non-load bearing		
	wt. 10	Cavity Area Separation Wall—½" SHEETROCK brand W/R FIRECODE "C" gypsum panels—1" USG gypsum liner panels set betw USG steel C-H studs 24" o.c.—RC-1 chan 24" o.c. screw att to side opp liner panels—1½" THERMAFIBER sound atten blks—single layer panels ea side appl vert & screw att—joints stag on opp sides & fin—perim caulked—est. fire rating based on U of C 6-23-75	50 BBN-750411	SA-925 8
	wt. 10	Cavity Shaft Wall Gypsum Drywall—2 layers ½" SHEETROCK brand FIRECODE "C" gypsum panels one side—1" USG shaft wall liner panels set betw USG steel C-H studs 24" o.c.—RC-1 chan spaced 24" o.c.—1½" THERMAFIBER sound atten blks—panels & RC-1 chan screw att to side opp liner panels—base layer appl horiz—face layer appl vert—joints fin—est. fire rating based on U of C 2-8-72 and U of C 6-23-75—rating also applies with IMPERIAL FIRECODE "C" Base and veneer finish surface	51 BBN-750412	SA-922 9
	wt. 16	Solid Area Separation Wall—5" SHEETROCK brand FIRECODE "C" gypsum panels—two 1" gypsum liner panels set betw USG steel H-studs 24" o.c.—2 x 3 wd studs 16" o.c. ea side on 2 x 3 plates 1" from liner panels—gypsum panels att with 1¼" Type W screws 12" o.c.—joints stag & fin—perim caulked—est. fire rating based on T-4481-OSU and T-1339-OSU	45 57 54 BBN-730104 Based on 2" sound atten. blankets in both cavities—BBN-730102 Based on 2" sound atten. blankets in one cavity—BBN-730103	SA-925 10
	wt. 9	Cavity Shaft Wall Gypsum Drywall—½" SHEETROCK brand FIRECODE "C" gypsum panels—1" USG shaft wall liner panels set betw USG steel C-H studs 24" o.c.—single layer panels ea side appl vert & screw att—joints stag on opp sides & fin—rating also applies with IMPERIAL FIRECODE "C" Base and veneer finish surface—U of C 6-23-75	N/A	SA-922 11
	wt. 9	Cavity Area Separation Wall—½" SHEETROCK brand FIRECODE "C" gypsum panels—1" USG gypsum liner panels set betw USG steel C-H studs 24" o.c.—single layer panels ea side appl vert & screw att—joints stag on opp side & fin—perim caulked—U of C 6-23-75	47 BBN-750704	SA-925 12
	wt. 9	Cavity Shaft Wall Gypsum Drywall—2 layers ½" SHEETROCK brand FIRECODE "C" gypsum panels one side—1" USG shaft wall liner panels set betw USG steel C-H studs 24" o.c.—panels appl vert to side opp liner panels & screw att—joints fin—rating also applies with IMPERIAL FIRECODE "C" Base and veneer finish surface—U of C 4-2-75	39 47 BBN-750706	SA-922 13
	wt. 10	Steel Stud—2 layers ½" SHEETROCK brand FIRECODE "C" gypsum panels ea side—2½" or 3½" USG studs 24" o.c.—1", 1½" or 2" THERMAFIBER sound atten blks stapled—panels appl vert & joints stag—base layer screw att—face layer strip lamin or screw att—joints fin—perimeter caulked—rating based on assembly with or without atten blankets—UL Des U412	55 54‡ 53 SA-800421 Based on lamin. face layer USG-114-FT-G&H Based on 2½" studs, screw-att. face layer and 1½" blankets—CK-654-40	SA-923 14
wt. 11 (T) thickn 11"	wt. 13 (T) thickn 12"	Steel Stud Chase Wall—2 layers ½" SHEETROCK brand FIRECODE "C" gypsum panels ea side—1" USG studs 24" o.c. in 2 rows spaced 5¾" apart—½" gypsum panel gussets spanning chase att to studs at qtr points—panels appl vert & screw att—1½" THERMAFIBER sound atten blks one side—joints stag & fin—perimeter caulked—est. fire rating based on UL Des U412	55‡ USG-134-FT-G&H	SA-923 15
Steel Stud Chase Wall—2 layers ½" SHEETROCK brand FIRECODE gypsum panels ea side—1" USG studs 24" o.c. in 2 rows spaced 6¼" apart—½" gypsum panel gussets or stl run braces spanning chase screw-att to studs—panels appl vert & screw att—joints stag & fin—UL Des U420	N/A	SA-923 16		
wt. 12 (T) thickn 5", 6½"	wt. 9 (T) thickn 3½"	Steel Stud—2 layers ½" SHEETROCK brand FIRECODE gypsum panels plain or vinyl faced vert appl ea side—2½" or 3½" USG studs 24" o.c.—based layer screw att—face layer lamin or screw att—joints fin or unfin—perimeter caulked—UL Des U411—rating also applies with plain panels horiz appl—WHI-0236-0237	48 Based on 3½" studs and ½" FIRECODE "C" panels—BBN-770408	SA-923 17
Steel Stud—2 layers ½" SHEETROCK brand FIRECODE gypsum panels—1" USG studs 24" o.c.—2 layers ea side vert appl & screw att—joints fin—U of C 6-15-65	N/A	SA-923 18		

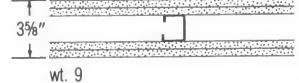
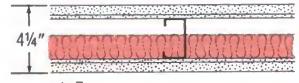
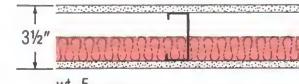
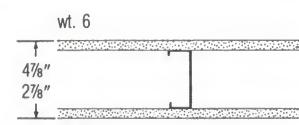
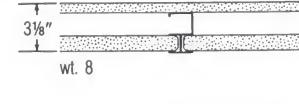
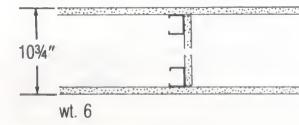
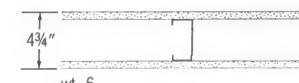
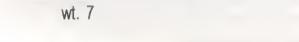
‡Based on 11-freq.

fire-rated construction detail & physical data	description & test no.	acoustical performance STC	description & test no.	folder reference
drywall steel-framed assembly—load bearing				
	Load-bearing Steel Stud—2 layers $\frac{5}{8}$ " SHEETROCK brand FIRECODE gypsum panels ea side—35SJ20 USG studs 24" o.c.—panels appl vert & att with Type S-12 screws 12" o.c.—joints stag & fin—load bearing up to 80% allowable stud axial load—UL Des U425	48	Based on 2" sound atten. blankets in cavity—USG-811006	SA-510 19
drywall demountable assembly—non-load bearing				
	Mov ULTRAWALL Partn—concealed "H" studs 24" o.c.—1 1/2" THERMAFIBER sound atten blks—3/4" x 24" bevel edge panels one side—double layer opp side with 3/4" Z-runners betw layers—joints unfin—perim caulked—painted—UL Des U416	50	TL-70-198	SA-1020 20
drywall wood-framed assemblies—load bearing				
	Wd Stud—2 layers $\frac{5}{8}$ " SHEETROCK brand FIRECODE or W/R FIRECODE "C" gypsum panels ea side—2 x 4 16" o.c.—base layer att with 6d nails 6" o.c.—face layer lamin or nailed to base—joints fin—UL Des U301	N/A		SA-924 21
	Wd Stud—2 layers $\frac{5}{8}$ " SHEETROCK brand FIRECODE "C" gypsum panels ea side—2x4 16" o.c.—2" THERMAFIBER sound atten blks—RC-1 chan one side spaced 24" o.c.—resil side screw att—opp side nail att—both base layers appl vert and face layers appl horiz—base layers perim caulked—joints fin—T-4799-OSU	58 52	USG-810219 Based on same assembly (non-fire rated) without blankets—USG-810218	SA-924 22
	Wd Stud—2 layers $\frac{5}{8}$ " SHEETROCK brand FIRECODE "C" gypsum panels—2 rows 2x4 16" o.c. on sep plates 1" apart—base layer att with 6d ctd nails 16" o.c.—face layer att with 7d ctd nails 7" o.c.—perim caulked—joints fin—est. fire rating based on UL Des U301	51 56	TL-69-214 Based on 3 1/2" thick blankets in one cavity—USG-710120	SA-924 23
	Stag Wd Stud—2 layers $\frac{5}{8}$ " SHEETROCK brand FIRECODE "C" gypsum panels—2x4 16" o.c. on 2x6 com plate—base layer att with 6d ctd nails 6" o.c.—face layer att with 8d ctd nails 8" o.c.—perim caulked—joints fin—est. fire rating based on UL Des U301	47	TL-69-211	SA-924 24
plastered wood-framed assembly—load bearing				
	Wd Stud—2 layers $\frac{5}{8}$ " IMPERIAL FIRECODE "C" gypsum base & $\frac{1}{16}$ " veneer finish both sides—2x4 16" o.c.—base layer 6d nails 6" o.c.—face layer 8d nails 8" o.c.—joints taped—UL Des U301	N/A		SA-913 25
plastered steel-framed assemblies—non-load bearing				
	Steel Stud—2 layers $\frac{1}{2}$ " IMPERIAL FIRECODE "C" gypsum base & veneer finish—2 1/2" USG studs 24" o.c.—both layers base appl vert, joints stag & screw att— $\frac{1}{16}$ " veneer finish—perimeter caulked—UL Des U424	53	Based on assembly with 1" sound atten. blankets—CK-654-66	SA-912 26

a partitions

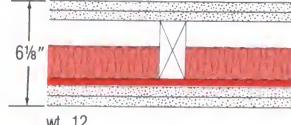
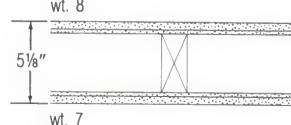
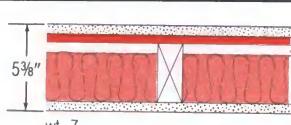
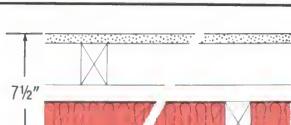
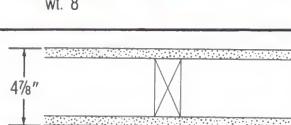
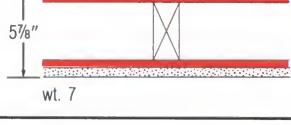
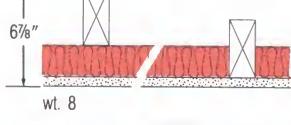
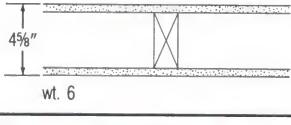
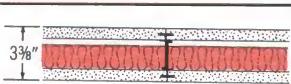
fire-rated construction detail & physical data	description & test no.	acoustical performance STC	description & test no.	folder reference
2-hour rated partitions				
 wt. 12 (T) thickn 5 1/4", 6 3/8"  wt. 10 (T) thickn 4 3/4", 5 1/8"	Steel Stud—2 layers 5/8" IMPERIAL FIRECODE gypsum base & veneer finish—2 1/2" or 3 1/8" USG studs 24" o.c.—base layer screw att—face layer lamin or screw att—joints taped—1/16" veneer finish—UL Des U411	47 51	Based on 2 1/2" studs—TL-75-73 Based on 2 1/2" studs and 1 1/2" sound attenu. blankets in cavity—TL-75-70	SA-912 27
	Steel Stud—2 layers 1 1/2" IMPERIAL FIRECODE "C" gypsum base & veneer finish—2 1/2" or 3 1/8" USG studs 24" o.c.—2" THERMAFIBER sound attenu blnts stapled one side—base appl vert & joints stag—base layer screw att—face layer strip lamin or screw att—joints taped—1/16" veneer finish—perimeter caulked—rating based on assembly with or without sound attenu blankets—UL Des U412	49	Field test—based on 2 1/2" studs and face layer strip laminated—KSO-1090072-a	SA-912 28
1-hour rated partitions				
 5 1/2" wt. 14	Steel Stud—Resil Gypsum Lath & Plaster—3 1/4" TRUSSTEEL studs 16" o.c.—1" THERMAFIBER sound attenu blnts—TR-1 clips one side & TL-1 clips opp side—3/8" ROCKLATH Base—1/2" 100:2-100:2 gypsum sand plaster—perimeter caulked	52	CK-664-38	SA-915 29
 4 1/4" wt. 15	Steel Stud—Gypsum Lath & Plaster—2 1/2" USG studs 16" o.c.—3/8" ROCKLATH Base—MS-1 clips both sides—1" THERMAFIBER sound attenu blnts—1/2" 100:2 1/2 gypsum sand plaster—perim caulked	49	CK-664-18	SA-915 30
 4 3/4" wt. 12	Steel Stud—Resil Gypsum Lath & Plaster—2 1/2" TRUSSTEEL studs 16" o.c.—TR-1 clips one side & TL-1 clips opp side—3/8" ROCKLATH Base—1/2" 100:2 gypsum sand plaster—perim caulked	46	TL-69-14	SA-915 31
 3 5/8" wt. 8	Steel Stud—1/2" IMPERIAL FIRECODE "C" gypsum base & veneer finish—2 1/2" USG studs—base screw att—joints stag & taped—1/16" veneer finish—perimeter caulked—stud spacing at 16" recommended—GA-WP-1240	45	Based on 3 1/8" studs 24" o.c. with 1" sound attenu. blankets in cavity—CK-664-1	SA-912 32
 4 1/4" wt. 14	Steel Stud—Gypsum Lath & Plaster—2 1/2" USG studs 16" o.c.—3/8" ROCKLATH Base—MS-1 clips both sides—1/2" 100:2 1/2 gypsum sand plaster—perim caulked	45	CK-664-17	SA-915 33
 4 1/2" wt. 13	Steel Stud—Gypsum Lath & Plaster—2 1/2" TRUSSTEEL studs 16" o.c.—3/8" ROCKLATH Base—1/2" 100:2-100:2 gypsum sand plaster	41‡	TL-58-7	SA-915 34
plastered wood-framed assemblies—load bearing				
 5 1/2" wt. 8	Wd Stud—Resil 5/8" IMPERIAL FIRECODE "C" gypsum base & veneer finish—2 x 4 16" o.c.—3" THERMAFIBER sound attenu blnts—RC-1 chan one side spaced 24" o.c.—based att with 1" Type S screws—opp side att direct with 1 1/4" Type W screws—1/16" veneer finish both sides—perimeter caulked—UL Des U311	50‡ 49	USG-111-FT-G&H Based on 1/2" gypsum base—CK-664-4	SA-913 35
 4 3/4" 5" wt. 7	Wd Stud—1/2" IMPERIAL FIRECODE "C" gypsum base att direct & veneer finish—2 x 4 16" o.c.—base nailed 7" o.c. 6d nails—1/16" veneer finish—joints taped—U of C 10-27-64	N/A		SA-913 36
 5" wt. 7	Wd Stud—5/8" IMPERIAL FIRECODE "C" gypsum base & veneer finish—2 x 4 16" o.c.—base nailed 7" o.c.—1 1/8" cem ctd nails—1/16" veneer finish both sides—joints taped—UL Des U305	N/A		SA-913 37
 6 1/8" wt. 11	Wd Stud—Resil 5/8" IMPERIAL gypsum base & veneer finish—2 x 4 16" o.c.—2 layer base one side screw att & lamin—single layer opp side screw att to RC-1 chan spaced 24" o.c.—3" THERMAFIBER sound attenu blnts—1/16" veneer finish both sides—perimeter caulked—est. fire rating based on UL Des U311	53	CK-654-38	SA-913 38

‡Based on 11-freq.

fire-rated construction detail & physical data	description & test no.	acoustical performance STC	description & test no.	folder reference
1-hour rated partitions				
	Steel Stud—2 layers 1/2" SHEETROCK brand gypsum panels ea side—1 1/8" USG studs 24" o.c.—panels appl vert & screw att—joints stag & fin—perimeter caulked—U of C 9-21-64 wt. 9	53	Based on FIRECODE "C" panels, 2 1/2" studs & 1 1/8" sound atten. blankets—CK-654-40	SA-923 39
	Steel Stud—5/8" SHEETROCK brand FIRECODE gypsum panels—2 1/2" USG studs 24" o.c.—1 1/2" THERMAFIBER sound atten blnts—2 layer—base layer 1/4" SHEETROCK brand panels screw att—5/8" face layer screw att—joints fin—perimeter caulked—est. fire rating based on T-1174-OSU wt. 7	55 53	CK-684-14 Based on 1/2" thick panels—CK-684-13	SA-923 40
	Steel Stud—1/2" SHEETROCK brand FIRECODE "C" gypsum panels—2 1/2" USG studs 24" o.c.—single layer panels one side appl vert & screw att—1 1/2" THERMAFIBER sound atten blnts one side—2 layers opp side—panels appl vert & screw att—joints stag & fin—perimeter caulked—est. fire rating based on T-3362-OSU wt. 7	50 41	SA-800504 Based on same construction without blankets—TL-69-148	SA-923 41
	Steel Stud—1/2" SHEETROCK brand FIRECODE "C" gypsum panels—2 1/2" USG studs 24" o.c.—single layer panels ea side appl vert & screw att—1 1/2" THERMAFIBER sound atten blnts one side—joints fin—perimeter caulked—T-3362-OSU wt. 5	45 48	TL-69-42 Based on 3 1/2" studs & 2" blankets—TL-65-158	SA-923 42
	Steel Stud—5/8" SHEETROCK brand FIRECODE gypsum panels—3 1/2" USG studs 24" o.c.—single layer panels vert or horiz appl & screw att—joints stag & fin—perimeter caulked—T-1174-OSU—based on panels horiz appl—GA-WP-1200 wt. 5	42‡ 48	USG-17-FT-G&H Based on 3" sound atten. blankets in cavity and FIRECODE "C" panels—SA-800415	SA-923 43
	Steel Stud—5/8" SHEETROCK brand FIRECODE gypsum panels—1 1/8" USG studs 24" o.c.—single layer panels vert appl & screw att 12" o.c.—joints fin—perimeter caulked—U of C 7-31-62 wt. 5	38‡	TL-64-29	SA-923 44
	Cavity Shaft Wall Gypsum Drywall—5/8" SHEETROCK brand FIRECODE "C" gypsum panels one side—1" USG shaft wall liner panels set betw USG steel C-H studs 24" o.c.—panels appl to side opp liner panels & screw att—joints fin—fire rating also applies with IMPERIAL FIRECODE "C" Base and veneer finish surface—U of C 4-3-75 wt. 8	N/A		SA-922 45
	Steel Stud Chase Wall—5/8" SHEETROCK brand FIRECODE gypsum panels ea side—1 1/8" USG studs 24" o.c. in 2 rows spaced 6 1/4" apart—5/8" gypsum panel gussets or steel run braces spanning chase screw att to studs—panels applied vert & screw att—joints stag & fin—UL Des U420 wt. 6	N/A		SA-923 46
drywall steel-framed assembly—load bearing				
	Load-bearing Steel Stud—5/8" SHEETROCK brand FIRECODE "C" gypsum panels—35SJ20 USG studs 24" o.c.—panels appl vert & att with 1" Type S-12 screws 12" o.c.—joints stag & fin—load bearing up to 100% allowable stud axial load—UL Des U425 wt. 6	40 41	USG-810519 Based on 2" sound atten. blankets in cavity—USG-810518	SA-510 47
drywall demountable assemblies—non-load bearing				
	Mov ULTRAWALL Partn—concealed "H" studs 24" or 30" o.c.—3/4" x 24" or 30" bevel edge ULTRAWALL gypsum panels—joints unfin—perim gaskets—based on 24" panels—U of C 8-18-67—based on 30" panels—U of C 7-23-69 wt. 7	42 47	Based on 24" panels—BBN-701008 Based on 24" panels and 1" sound atten. blankets in cavity—BBN-701216	SA-1020 48
	Mov ULTRAWALL Partn—concealed "H" studs 24" o.c.—stl flr run—painted stl clg run with int tabs—3/4" x 24" bevel edge ULTRAWALL gypsum panels—joints unfin—WHI-120/121—based on alum clg run—WHI-495-0225/0226 wt. 7	N/A		SA-1020 49

‡Based on 11-freq.

a partitions

fire-rated construction	detail & physical data	description & test no.	acoustical performance	STC	description & test no.	folder reference
1-hour rated partitions						
	Wd Stud—2 layers 1/2" SHEETROCK brand FIRECODE "C" gypsum panels ea side—2 x 4 16" o.c.—3" THERMAFIBER sound atten blks—RC-1 chan one side spaced 24" o.c.—resil. side screw att opp side nail att—both base layers appl vert and face layers appl horiz—base layers perim caulked—joints fin—est. fire rating based on UL Des U311 wt. 12		59 49	TL-67-239 Based on same construction without blankets—TL-67-212	SA-924	50
	Wd Stud—1/2" SHEETROCK brand FIRECODE "C" gypsum panels—2 x 4 16" o.c.—2 layer—base layer 1/4" SHEETROCK brand gypsum panels appl vert with 4d ctd nails—1/2" panel face layer strip lamin—joints stag & fin—perimeter caulked—est. fire rating based on UL Des U305 wt. 8		45 53	TL-69-52 Based on 5/8" lamin. face layers & 1 1/2" sound atten. blankets—USG-221-ST-G&H	SA-924	51
	Wd Stud—2 layers 3/8" SHEETROCK brand gypsum panels lamin & nailed—2 x 4 16" o.c.—joints fin—T-118-48-OSU wt. 7		38‡	TL-57-14	SA-924	52
	Wd Stud—Resil 5/8" SHEETROCK brand FIRECODE "C" gypsum panels—2 x 4 16" or 24" o.c.—3" THERMAFIBER sound atten blks—RC-1 chan one side spaced 24" o.c.—panels att with 1" Type S screws—opp side direct att with 1 1/4" Type W screws—joints fin—perimeter caulked—UL Des U311 wt. 7		50	BBN-760903	SA-924	53
	Stag Wd Stud—5/8" SHEETROCK brand FIRECODE gypsum panels—2 x 3 16" o.c.—2 x 3 plates 1" apart—panels nailed 7" o.c.—3" THERMAFIBER sound atten blks one side—joints fin—perim caulked—est. fire rating based on UL Des U305 wt. 8		54	Based on screws or nails 7" o.c.—TL-77-149	SA-924	54
	Wd Stud—5/8" SHEETROCK brand FIRECODE or W/R FIRECODE "C" gypsum panels—2 x 4 16" or 24" o.c.—panels nailed 7" o.c.—1 1/8" cem ctd nails—joints fin—perim caulked—UL Des U305 based on 16" stud spacing—UL Des U314 based on 24" stud spacing wt. 7		46 34‡	Based on 24" stud spacing and screws 12" o.c.; includes 3" sound atten. blankets—BBN-700725 Based on studs and screws 16" o.c.—USG-30-FT-G&H	SA-924	55
	Wd Stud—Resil 5/8" SHEETROCK brand FIRECODE gypsum panels—2 x 4 16" o.c.—RC-1 chan both sides spaced horiz 24" o.c. att with 6d nails—panels att with 1" Type S screws—joints fin—perimeter caulked—T-1396-OSU wt. 7		45‡	TL-60-52	SA-924	56
	Stag Wd Stud—5/8" SHEETROCK brand FIRECODE "C" gypsum panels—2 x 4 16" o.c. on 2 x 6 com plate—panels att with 6d ctd nails 7" o.c.—2" THERMAFIBER sound atten blks one side—perim caulked—joints fin—est. fire rating based on UL Des U305 wt. 8		45	TL-69-213	SA-924	57
45-min. rated partitions						
drywall wood-framed assembly—load bearing						
	Wd Stud—1/2" SHEETROCK brand FIRECODE "C" gypsum panels—2 x 4 16" o.c.—panels nailed 7" o.c.—1 1/8" cem ctd nails—joints fin—UL Des U317 wt. 6		N/A		SA-924	58
other partitions						
drywall demountable assemblies—non-load bearing						
	Mov ULTRAWALL Partn—concealed "T" studs both sides 24" o.c.—3/4" x 24" bevel edge ULTRAWALL gypsum panels—1 1/2" THERMAFIBER sound atten blks—joints stag—unfin & perim caulked—N/A wt. 8		48 40	TL-70-251 Based on same construction without blankets—TL-70-252	SA-1020	59
	Mov ULTRAWALL Partn—concealed H/R-studs both sides 24" o.c.—3/4" x 24" bevel edge ULTRAWALL gypsum panels—1 1/2" THERMAFIBER sound atten blks—joints stag—unfin—perim gaskets—N/A wt. 7		46 40	USG-740909 Based on same construction without blankets—USG-750206	SA-1020	60

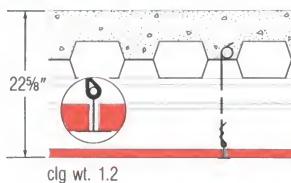
(For fire and sound test data on other partition assemblies, see U.S.G. Technical Bulletin: CS-6 Metal-Framed Metal Lath and Plaster Systems.)

‡Based on 11-freq.

clg. STC
range†physical data
construction detail

description & test no.

comments

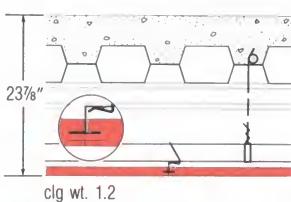
folder
reference**acoustical and air distributing ceilings****3-hour rated ceilings**40
to
44

AURATONE FIRECODE $\frac{5}{8}$ " x 24" x 48" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fixt prot by 1 $\frac{1}{4}$ " THERMAFIBER min wool bd—2 $\frac{1}{2}$ " conc on cellular stl flr—UL Des A207 (f)

Includes 4-hr. unrestrained beam. See Sound Control Ceilings Folder for STC values of various patterns

SA-905

1

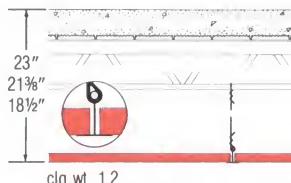
45
to
49

AURATONE FIRECODE $\frac{3}{4}$ " x 12" x 12" acoust clg tile on Concealed Z-runner Syst—clg interrupted—light fixt prot by 1 $\frac{1}{4}$ " THERMAFIBER min wool bd—2 $\frac{1}{2}$ " conc on cellular stl flr—UL Des A009 (f)

Includes 4-hr. unrestrained beam. See Sound Control Ceilings Folder for STC values of various patterns

SA-905

2

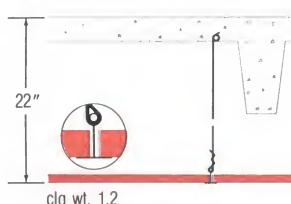
2-hour rated ceilings40
to
44

AURATONE FIRECODE $\frac{5}{8}$ " x 24" x 48" or 24" x 24" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fixt prot by 1 $\frac{1}{4}$ " THERMAFIBER min wool bd—2 $\frac{1}{2}$ " conc deck on riblath over bar joist—UL Des G211 (f)—UL Des G227 (f)—UL Des G251 (f)

UL Des G227 is Shadow Line System and includes 3-hr. unrestrained beam. UL Des G251 includes 2-hr. beam and only $\frac{5}{8}$ " x 24" x 48" panels. $\frac{5}{8}$ " AURATONE FIRECODE panels acceptable for light fixt. prot. on UL Des G211 & UL Des G227

SA-905

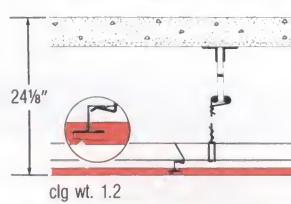
3

40
to
44

AURATONE FIRECODE $\frac{5}{8}$ " x 24" x 48" or 24" x 24" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fixt prot by $\frac{5}{8}$ " AURATONE FIRECODE panels or 1 $\frac{1}{4}$ " THERMAFIBER min wool bd—2" prestressed conc units with 6" deep stems 48" o.c.—UL Des J202 (f)

SA-905

4

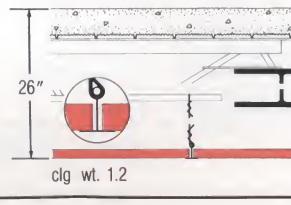
40
to
44

AURATONE FIRECODE $\frac{3}{4}$ " x 12" x 12" acoust clg tile on Concealed Z-runner Syst—clg interrupted—light fixt prot by 1 $\frac{1}{4}$ " min wool bd—2 $\frac{1}{2}$ " conc deck on riblath over bar joist—UL Des G019 (f)

See Sound Control Ceilings Folder for STC values of various patterns

SA-905

5

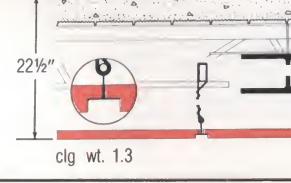
40
to
44

AURATONE FIRECODE $\frac{3}{4}$ " x 24" x 24" to 30" x 60" or 20" x 60" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fixt prot by $\frac{5}{8}$ " AURATONE FIRECODE panels or 1 $\frac{1}{4}$ " THERMAFIBER min wool bd—2 $\frac{1}{2}$ " conc deck on riblath over bar joist—UL Des G231 (f)

Panels $\frac{5}{8}$ " thick also qualify, except in 30" x 60" size. Includes 3-hr. unrestrained beam

SA-905

6

40
to
44

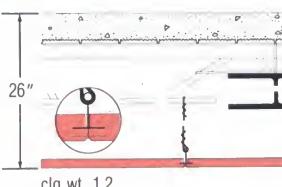
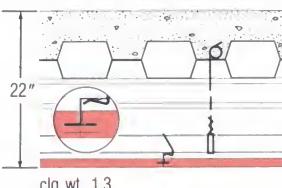
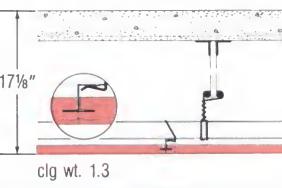
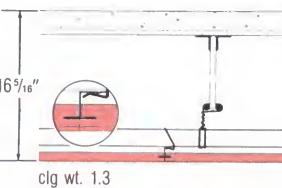
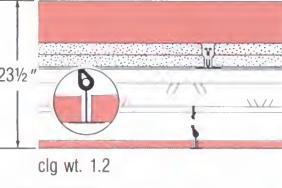
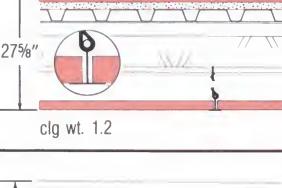
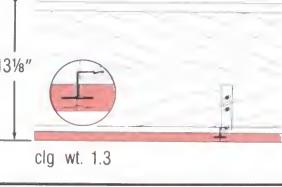
ACOUSTONE FIRECODE $\frac{3}{4}$ " x 24" x 24" min acoust panels on Exp Shadow Line Grid Syst—clg interrupted—light fixt prot by $\frac{5}{8}$ " AURATONE FIRECODE panels or 1 $\frac{1}{4}$ " THERMAFIBER min wool bd—2 $\frac{1}{2}$ " conc deck on riblath over bar joist—UL Des G228 (f)

Includes 2-hr. unrestrained beam

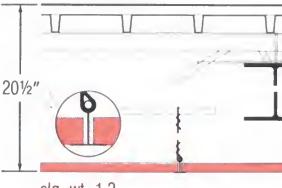
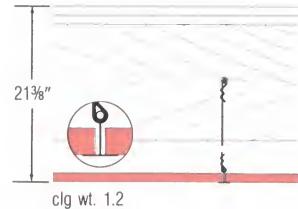
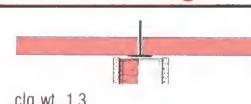
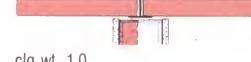
SA-905

7

b ceilings

clg. STC range†	physical data construction detail	description & test no.	comments	folder reference
2-hour rated ceilings				
40 to 44		AURATONE FIRECODE $\frac{5}{8}$ " x 12" x 12" to 24" x 24" acoust clg tile on Concealed Accessible Grid Syst—clg interrupted—light fixt prot by 1 $\frac{1}{4}$ " THERMAFIBER min wool bd—2 $\frac{1}{2}$ " conc deck on riblath over bar joist—UL Des G008 (f)	Includes 2-hr. unrestrained beam. See Sound Control Ceilings Folder for STC values of various patterns	SA-905 8
40 to 44		ACOUSTONE FIRECODE $\frac{3}{4}$ " x 12" x 12" min acoust tile on Concealed Z-runner Syst—clg interrupted—light fixt prot by 1 $\frac{1}{4}$ " THERMAFIBER min wool bd—2 $\frac{1}{2}$ " conc deck on cellular stl flr—UL Des A010 (f)	Includes 1 $\frac{1}{2}$ -hr. unrestrained beam. Unrestrained assembly rating—1 $\frac{1}{2}$ hr.	SA-905 9
40 to 44		ACOUSTONE FIRECODE $\frac{3}{4}$ " x 12" x 12" min acoust tile on Concealed Z-runner Syst—2 $\frac{1}{2}$ " conc deck on riblath over bar joist—UL Des G018 (f)		SA-905 10
1½-hour rated ceilings				
35 to 39		ACOUSTONE FIRECODE $\frac{3}{4}$ " x 12" x 12" min acoust tile on Concealed Z-runner Syst—2" conc deck on riblath over bar joist—UL Des G020 (f)		SA-905 11
40 to 44		AURATONE FIRECODE $\frac{5}{8}$ " x 24" x 48" acoust clg panels in direct-hung Susp Exp Grid Syst—2" SPAN-ROCK gypsum plank & 3 $\frac{1}{2}$ " noncomb insul over bar joist—UL Des P228 (f)		SA-905 12
40 to 44		AURATONE FIRECODE $\frac{5}{8}$ " x 24" x 48" acoust clg panels in direct-hung Susp Exp Grid Syst—clg interrupted—light fixt prot by $\frac{5}{8}$ " AURATONE FIRECODE panels—1" stl roof deck & $\frac{5}{8}$ " SHEETROCK FIRECODE gypsum panels & 1" min fiber insul over bar joist—UL Des P233 (f)	No max. on insul. thickness. Unrestrained assembly rating—1 hr.	SA-905 13
35 to 39		ACOUSTONE FIRECODE $\frac{3}{4}$ " x 12" x 12" min acoust tile on Concealed Z-runner Syst—1" nom wd sub & fin floor over wd joist 16" o.c.—UL Des L003 (f)		SA-905 14

†Per AMA 1-II test procedure.

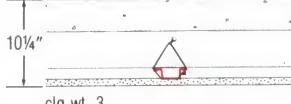
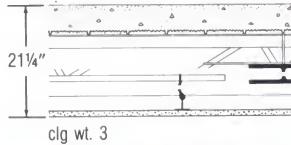
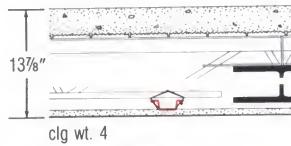
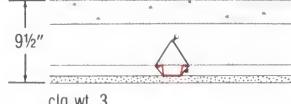
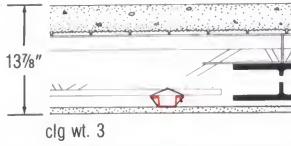
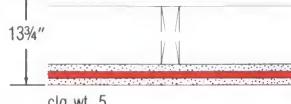
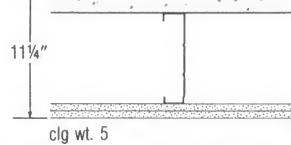
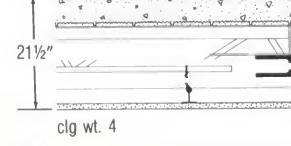
clg. STC range†	physical data construction detail	description & test no.	comments	folder reference
1-hour rated ceilings				
40 to 44		AURATONE FIRECODE 5/8" x 24" x 48" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fixt prot by 1 1/4" THERMAFIBER min wool bd—1 1/2" stl roof deck & 1" noncomb insul over bar joist—UL Des P214 (f)	Includes 1-hr. unrestrained beam. See Sound Control Ceilings Folder for STC values of various patterns	SA-905 15
40 to 44		AURATONE FIRECODE 5/8" x 24" x 48" or 24" x 24" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fixt prot by 5/8" AURATONE FIRECODE panels or 1 1/4" THERMAFIBER min wool bd—1" nom wd sub & fin flr over 2 x 10 wd joist—UL Des L206 (f)	See Sound Control Ceilings Folder for STC values of various patterns	SA-905 16
noncombustible ceilings				
35 to 39		ACOUSTONE "F" Foil-Backed 3/4" x 12" x 24" or 12" x 36" min acoust tile on 1-Way Exp Grid Syst—ASTM E84 (f)	One-way exposed grid system for accessibility	SA-905 17
40 to 44		ACOUSTONE Foil-Backed Fissured or Glacier 3/4" x 12" x 12" min acoust tile on concealed 100% Accessible Direct-hung Susp Syst—ASTM E84 (f)	Basic direct-hung concealed accessible system	SA-905 18
35 to 39		ACOUSTONE "F" 3/4" x 12" x 12" or 12" x 24" min acoust tile on Concealed Z-runner Syst—ASTM E84 (f)	Basic concealed spline acoustical tile system; STC estimated	SA-905 19
40 to 44		AURATONE 5/8" or 3/4" x 24" x 24" or 24" x 48" acoust clg panels in Susp Exposed Grid Syst—ASTM E84 (f)	Basic noncombustible lay-in panels; NRC varies with pattern	SA-905 20
44(1) 44(2)		AURATONE 5/8" x 24" x 48" acoust clg panels in Susp Exp Grid Syst—contin over partn—1 1/2" THERMAFIBER sound atten blkts over clg—ASTM E84 (f)— (1) USG-210-FT-G&H (s)—(2) USG-211-FT-G&H (s)	Test USG-211-FT includes double-layer blankets extending 4 ft. both sides of partition	SA-905 21

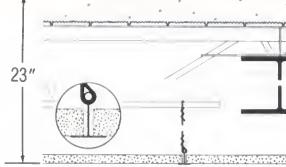
†Per AMA 1-II test procedure.

fire-rated construction detail & physical data	description & test no.	acoustical performance	folder reference
3-hour rated ceilings	plastered assembly	STC IIC	description & test no.
gypsum drywall and plaster ceilings			
3-hour rated ceilings			

	5/8" IMPERIAL FIRECODE "C" gypsum base & veneer finish ceiling—USG met fur chan—base att with 1" Type S screws 12" o.c.—joints exp or taped—1/16" veneer finish—2 1/2" conc on riblath over bar joist—furring channel spacing at 16" o.c.recom—includes 3-hr. unrestrained beam—UL Des G512	N/A	SA-912 22
gypsum drywall surfaces			
gypsum drywall surfaces			
	5/8" SHEETROCK brand FIRECODE "C" gypsum panels—USG met fur chan 24" o.c.—panels att with 1" Type S screws 12" o.c.—joints exp or fin—2 1/2" conc on riblath over bar joist—includes 3-hr. unrestrained beam—UL Des G512	N/A	SA-923 23

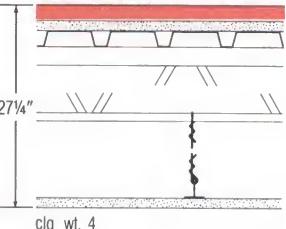
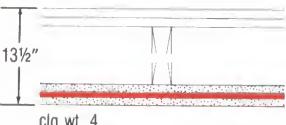
b ceilings

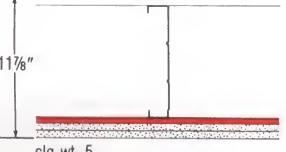
fire-rated construction	acoustical performance	detail & physical data	description & test no.	STC	IIC	description & test no.	folder reference
3-hour rated ceilings							
	%" SHEETROCK brand FIRECODE "C" gypsum panels—USG met fur chan 24" o.c.—panels att with 1" Type S screws—joints fin—prestressed 2 3/4" reg or 2 1/2" lightwt conc units with 6" deep stems 48" o.c.—UL Des J502—UL Des J503—UL Des J504	N/A		SA-923	24		
	1/2" SHEETROCK brand FIRECODE "C" gypsum panels—USG susp grid with main run 4' o.c. and cross tees 2' o.c.—gypsum panels screw-att below grid—joints fin—3 1/4" conc on riblath over bar joist—rating also applies with %" panels and 2 3/4" conc slab—includes 3-hr. unrestrained beam—UL Des G529	N/A		SA-923	25		
2-hour rated ceilings							
	1/2" IMPERIAL FIRECODE "C" gypsum base & veneer finish ceiling furred or susp—USG met fur chan—base att with screws 12" o.c.—joints taped—1/16" veneer finish—2 1/2" conc on riblath over bar joist—spacing of furring channel at 16" o.c. recommended—includes 2-hr. unrestrained beam—UL Des G515	N/A		SA-912	26		
	Resil 2 layers 5/8" IMPERIAL FIRECODE "C" gypsum base & veneer finish ceiling—1" nom wd sub & fin flr—2 x 10 wd joist 16" o.c.—RC-1 chan spaced 24" o.c. screw att over base layer—face layer screw att to chan 12" o.c.—1/16" veneer finish—joints taped—UL Des L511	N/A		SA-913	27		
plastered assemblies							
	%" SHEETROCK brand FIRECODE "C" gypsum panels—USG met fur chan 24" o.c.—panels att with 1" Type S screws—joints fin—2" prestressed reg or lightwt conc units with 6" deep stems 48" o.c.—UL Des J502—UL Des J503	N/A		SA-923	28		
	1/2" SHEETROCK brand FIRECODE "C" gypsum panels—furred or susp—USG met fur chan 24" o.c.—panels att with 1" Type S screws 12" o.c.—joints exp or fin—2 1/2" conc on riblath or corrug stl deck over bar joist—includes 2-hr. unrestrained beam—UL Des G515	54	Ceiling STC rating based on furred interrupted clg. & 1 1/2" sound atten. blankets extendg. 4 ft. beyond partn.—USG-189-FT-G&H	SA-923	29		
	Resil 2 layers 5/8" SHEETROCK brand FIRECODE "C" gypsum panel ceiling—1" nom wd sub & fin flr—2 x 10 wd joist 16" o.c.—RC-1 chan spaced 24" o.c. screw att over base layer—panels—face layer screw att to chan 12" o.c.—joints fin—UL Des L511	N/A		SA-924	30		
	5/8" SHEETROCK brand FIRECODE "C" gypsum panels—USG 75SJ18 steel joists 24" o.c.—2 1/2" conc flr over corrug steel deck—dbl layer gypsum panel ceiling—base panels att with 1" Type S-12 screws 12" o.c.—face panels att with 1 1/8" Type S-12 screws 12" o.c.—joints stag and fin—est. fire rating based on witnessed laboratory test	44 47	KAL-443533 Based on carpet & pad— KAL-443680 Based on RC-1 resil chan. 24" o.c.—KAL-443534	73	31	SA-510	
	1/2" SHEETROCK brand FIRECODE "C" gypsum panels—USG susp grid with main run 4' o.c. and cross tees 2' o.c.—gypsum panels screw-att below grid—joints fin—2 1/2" conc on riblath over bar joist—includes 3-hr. unrestrained beam—UL Des G529	N/A		SA-923	32		

fire-rated construction		acoustical performance	folder reference
detail & physical data	description & test no.	STC IIC	description & test no.
 <p>23"</p> <p>clg wt. 2.0</p>	<p>FIRECODE ½" x 24" x 24" Gypsum Panels on Susp Exp Grid Syst—clg interrupted—light fixt prot by ½" AURATONE FIRECODE panels or 1¼" THERMAFIBER min wool bd—2½" conc deck on riblath over bar joist—Includes 2-hr. unrestrained beam—UL Des G222—fire rating 1½ hr. with ½" x 24" x 48" panels; includes 1½-hr unrestrained beam—UL Des G259</p>	N/A	SA-905 33

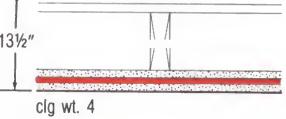
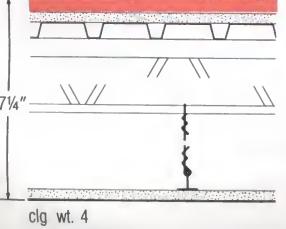
1½-hour rated ceilings

gypsum drywall surfaces

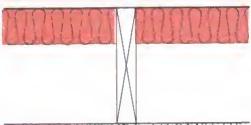
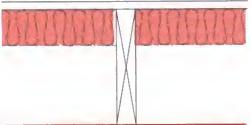
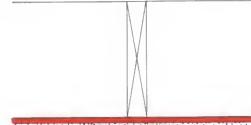
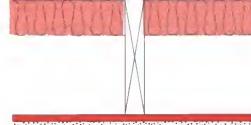
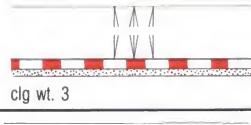
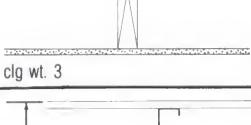
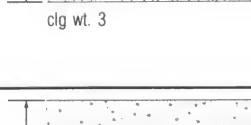
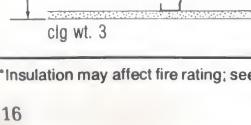
 <p>27 1/4"</p> <p>clg wt. 4</p>	<p>5/8" SHEETROCK brand FIRECODE "C" gypsum panels—sus grid with main run 4' o.c. and cross tees 2' o.c.—gypsum panels screw-att below grid—joints stag and fin—min 1" roof insul and 5/8" gypsum bd on steel deck over bar joists—1-hr. rating based on assembly with ½" thick panels—UL Des P510</p>	N/A	SA-923 35
 <p>13 1/2"</p> <p>clg wt. 4</p>	<p>Resil 2 layers ½" SHEETROCK brand FIRECODE "C" gypsum panel ceiling—1" nom wd sub & fin fir—2 x 10 wd joist 16" o.c.—RC-1 chan spaced 24" o.c. screw att over base layer panels—face layer screw att to chan 12" o.c.—joists fin—UL Des L510</p>	N/A	SA-924 36

 <p>11 1/8"</p> <p>clg wt. 5</p>	<p>Resil ½" SHEETROCK brand FIRECODE "C" gypsum panels—¾" T&G plywd fir att to joists with Type S-12 screws 24" o.c.—USG 95SJ16 steel joists 24" o.c.—dbl layer gypsum panel clg att to RC-1 chan screw att to joists—base panels att with 1" Type S screws—face panels att with 1½" Type S screws—joists fin—UL Des L527</p>	48 51	USG-771101 Based on carpet & pad —SA-781110	SA-510 37
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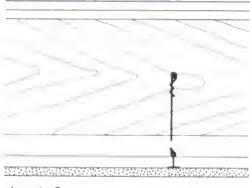
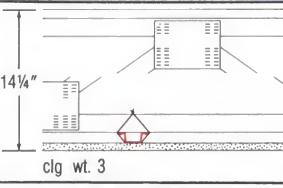
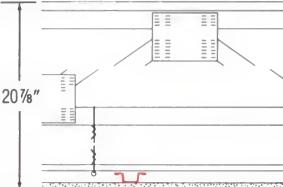
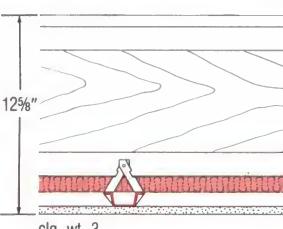
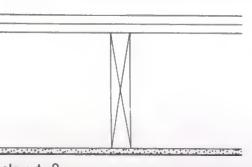
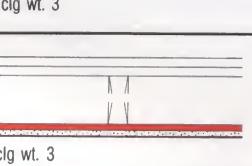
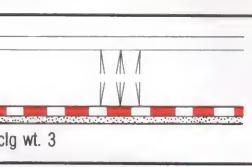
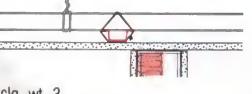
plastered assemblies

 <p>13 1/2"</p> <p>clg wt. 4</p>	<p>Resil 2 layers ½" IMPERIAL FIRECODE "C" gypsum base & veneer finish ceiling—1" nom wd sub & fin fir—2 x 10 wd joist 16" o.c.—RC-1 chan 24" o.c. screw att over base layer—face layer screw att to chan 12" o.c.—1/16" veneer finish—joints taped—UL Des L510</p>	N/A	SA-913 38
 <p>27 1/4"</p> <p>clg wt. 4</p>	<p>5/8" IMPERIAL FIRECODE "C" gypsum base and veneer finish ceiling—sus grid with main run 4' o.c. and cross tees 2' o.c.—base screw-att below grid—joints stag and taped—min 1" roof insul and 5/8" gypsum bd on stl deck over bar joists—1-hr. rating based on assembly with ½" thick base—UL Des P510</p>	N/A	SA-912 39

b ceilings

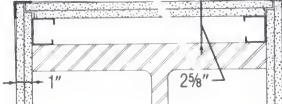
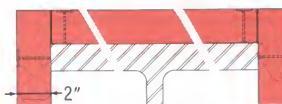
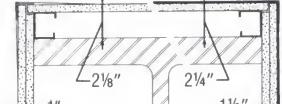
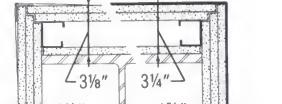
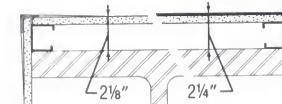
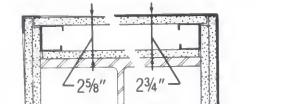
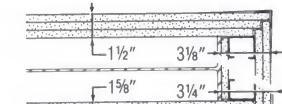
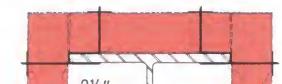
fire-rated construction detail & physical data	description & test no.	acoustical performance STC IIC	description & test no.	folder reference
1-hour rated ceilings				
	gypsum drywall surfaces			
	5/8" SHEETROCK brand gypsum panel ceiling—1" nom wd sub & fin flr—2 x 10 wd joist 16" o.c.—3" THERMAFIBER sound atten blks betw joists—panels att with 6d nails 6" o.c.—joints fin—est. fire rating based on UL Des L501	41 32 40 58	CK-6412-6 Based on 44-oz carpet & 40-oz pad atop flooring—CK-6412-5	SA-924 40
clg wt. 3				
	Resil 5/8" SHEETROCK brand FIRECODE "C" gypsum panel ceiling—1/8" perlite-sand conc over 5/8" plywood subflr—2 x 10 wd joists 16" o.c.—3" glass fiber batts betw joists—RC-1 chan screw att to joists—panels att with 1" Type S screws—joints fin—UL Des L516	N/A		SA-924 41
clg wt. 3				
	Resil 1/2" SHEETROCK brand FIRECODE "C" gypsum panel ceiling—1" nom wd sub & fin flr—2 x 10 wd joist 16" o.c.—RC-1 chan spaced 24" o.c.—panels att with 1" Type S screws—joints fin—UL Des L514	N/A		SA-924 42
clg wt. 3				
	Resil SHEETROCK brand gypsum panel ceiling—1/4" nom wd sub & fin flr—2 x 10 wd joist 16" o.c.—RC-1 chan screw att to joists—panels att with 1" Type S screws—joints fin—est. fire rating based on UL Des L514	47 39 47 39	Based on 1/2" FIRECODE "C" panels—CK-6512-6 Based on 5/8" reg gypsum panels—CK-6412-10	SA-924 43
clg wt. 3				
	Resil SHEETROCK brand gypsum panel ceiling—1/4" nom wd sub & fin flr—2 x 10 wd joist 16" o.c.—3" THERMAFIBER sound atten blks betw joists—RC-1 chan screw att to joists—panels att with 1" Type S screws—joints fin—est. fire rating based on UL Des L514	47 67 48 66	Based on 1/2" FIRECODE "C" panels—CK-6512-7 Based on 5/8" reg gypsum panels—CK-6412-9	SA-924 44
clg wt. 3				
	Resil SHEETROCK brand gypsum panel ceiling—1/4" nom wd sub & fin flr—44-oz carpet & 40-oz pad atop flr—2 x 10 wd joist 16" o.c.—RC-1 chan screw att to joists—panels att with 1" Type S screws—joints fin—est. fire rating based on UL Des L514	51 46 50 46	Based on 1/2" FIRECODE "C" panels—CK-6512-9 Based on 5/8" reg gypsum panels—CK-6412-3	SA-924 45
clg wt. 3				
	Resil SHEETROCK brand FIRECODE gypsum panel ceiling—Amer Plywood Assn 2-4-1 flr 4 x 10 wd joist 48" o.c.—USG met fur chan spaced 24" o.c.—panels att with 1" Type S screws—joints fin—UL Des L508	N/A		SA-924 46
clg wt. 3				
	5/8" SHEETROCK brand FIRECODE gypsum panel ceiling—1" nom wd sub & fin flr—2 x 10 wd joist 16" o.c.—panels att with 6d nails 6" o.c.—joints fin—UL Des L501	38 32 39 56	CK-6412-7 Based on 44-oz carpet & 40-oz pad atop flooring—CK-6412-8	SA-924 48
clg wt. 3				
	1/2" SHEETROCK brand FIRECODE "C" gypsum panel ceiling—1" nom wd sub & fin flr—2 x 10 wd joist 16" o.c.—panels att with 5d cem ctd nails 6" o.c.—joints fin—UL Des L512	N/A		SA-924 49
clg wt. 3				
	9/8" 1/2" SHEETROCK brand FIRECODE "C" gypsum panels—USG 725SJ18 steel joists 24" o.c.—dbl layer gypsum panel clg and 5/8" T&G plywood flr att to joists with Type S-12 screws 12" o.c.—dbl layer gypsum panels around beam—joints exp—includes 1-hr. unrestrained beam—UL Des L524	39 43 56 60	Based on 95SJ16 joists—USG-760105 Based on 95SJ16 joists and 3" sound atten. blankets—USG-760310 Based on 95SJ16 joists and carpet & pad—USG-760106 Based on 95SJ16 joists and carpet & pad with 3" sound atten. blks—USG-760405	SA-510 50 SA-923
10% clg wt. 3				
	10% 5/8" SHEETROCK brand FIRECODE "C" gypsum panels—USG 75SJ18 steel joists 24" o.c.—2 1/2" conc flr on corrug steel deck—gypsum panel ceiling att to joists with 1" Type S-12 screws 12" o.c.—joints fin—est. fire rating based on witnessed laboratory test	45 70	Based on RC-1 resil chan 24" o.c.—KAL-443536 Based on carpet & pad—KAL-443535	SA-510 51
clg wt. 3				

*Insulation may affect fire rating; see SA-905.

fire-rated construction		acoustical performance			folder reference
detail & physical data	description & test no.	STC	IIC	description & test no.	
	<p>½" or ¾" SHEETROCK brand FIRECODE "C" gypsum panel ceiling—1" nom wd sub & fin flr—2 x 10 wd joist 16" o.c.—USG susp grid with main run 4' o.c. and cross tees 2' o.c.—panels screw-att below grid—joints fin—UL Des L525</p>	N/A			SA-924 52
clg wt. 3					
	<p>¾" SHEETROCK brand FIRECODE "C" gypsum panel ceiling—2 x 12 wd truss of 2 x 4 lbr secured with steel truss plates—trusses 24" o.c.—¾" nom plywd flr—USG met fur chan 24" o.c.—wire-fied to trusses—panels att with 1" type S screws 12" o.c.—joints fin—fire rating also applies with IMPERIAL FIRECODE "C" Base and veneer finish surface—UL Des L528</p>	N/A			SA-924 SA-913 53
14 ¼"					
clg wt. 3					
	<p>¾" SHEETROCK brand FIRECODE "C" gypsum panel ceiling—2 x 12 wd truss of 2 x 4 lbr secured with steel truss plates—trusses 24" o.c.—¾" nom plywd flr—USG susp grid with main run 4' o.c. and cross tees 2' o.c.—panels att with 1" type S-12 screws 12" o.c.—joints fin—fire rating also applies with IMPERIAL FIRECODE "C" Base and veneer finish surface—UL Des L529</p>	N/A			SA-924 SA-913 54
20 ¾"					
clg wt. 3					
	<p>½" SHEETROCK brand FIRECODE "C" gypsum panel ceiling—¾" T&G plywd flr—10" I-shaped wd joist 24" o.c.—USG met fur chan 24" o.c. clip-att to joist—1" THERMAFIBER insul laid over chan below joists—panels screw att to chan 12" o.c.—joints fin—UL Des L530</p>	47	40	TL-81-87—TL-81-16	SA-924 55
12 ½"					
clg wt. 3					
plastered assemblies					
	<p>½" IMPERIAL FIRECODE "C" gypsum base & veneer finish ceiling—2 x 10 wd joist 16" o.c.—1" nom wd sub & fin flr—base att with 5d nails 6" o.c.—1/8" veneer finish—joints taped—UL Des L512</p>	N/A			SA-913 56
clg wt. 3					
	<p>¾" IMPERIAL FIRECODE gypsum base & veneer finish ceiling—1" nom wd sub & fin flr—2 x 10 wd joist 16" o.c.—base att with 6d nails 6" o.c.—1/8" veneer finish—joints taped—UL Des L501</p>	N/A			SA-913 57
clg wt. 3					
	<p>Resil ½" IMPERIAL FIRECODE "C" gypsum base & veneer finish ceiling—2 x 10 wd joist 16" o.c.—1" nom wd sub & fin flr—RC-1 chan spaced 16" o.c. and at end joints—base att with Type S screws 12" o.c.—1/8" veneer finish—joints taped—UL Des L514</p>	N/A			SA-913 58
clg wt. 3					
	<p>¾" IMPERIAL FIRECODE gypsum base & veneer finish ceiling—Amer Plywood Assn 2-4 1 flr 4 x 10 wd joist 48" o.c.—USG met fur chan—base att with 1" Type S screws—1/8" veneer finish—joints taped—UL Des L508</p>	N/A			SA-913 59
clg wt. 3					
noncombustible ceilings		gypsum drywall surfaces			
	<p>¾" SHEETROCK brand FIRECODE gypsum panels—1½" cr chan 4' o.c.—USG met fur chan 24" o.c.—panels screw att 12" o.c.—joints fin—N/A</p>	45		"Up and over" attenuation—suspension and ceiling membrane only—USG-5-FT-G&H	SA-923 60
clg wt. 3					

(See U.S.G. Technical Bulletin CS-6 Metal-Framed Metal Lath and Plaster Systems, for other fire-tested ceiling assemblies. Refer to U.S.G. Technical Folder SA-707 THERMAFIBER Fire Safety Systems, for safing insulation used with these systems.)

C structural fireproofing

column type	physical data construction detail	description & test no.	comments	folder reference
column fireproofing				
		4-hour rated applications		
W14 x228		Gypsum Drywall or Veneer Finish Fireprfg—2 layers 1/2" SHEETROCK brand FIRECODE "C" panels or 1/2" IMPERIAL FIRECODE "C" gypsum base around col— panels screw att to 158ST steel studs at corners—met corner beads—joints fin or 1/16" veneer finish over base— UL Des X507 (f)		SA-923 1
W14 x228		THERMAFIBER Mineral Fireprfg—2" fireprfg around col att with 1/8" stl wire studs welded to col 24" o.c.— UL Des X304 (f)	Dry assembly; offers excellent thermal insulation for exterior columns	SA-707 2
3-hour rated applications				
W14 x228		Gypsum Drywall or Veneer Finish Fireprfg— 1/2" SHEETROCK brand FIRECODE "C" panels or 1/2" IMPERIAL FIRECODE "C" gypsum base around col— double layer over ea flange end—inner layers on flange face separ by 158ST steel studs & screw att—met beads on corners—joints fin or 1/16" veneer finish over base— UL Des X514 (f)		SA-923 3
W10 x49		Gypsum Drywall or Veneer Finish Fireprfg—3 layers 1/2" SHEETROCK brand FIRECODE "C" panels or 1/2" IMPERIAL FIRECODE "C" gypsum base around col— triple layer over ea flange end—inner layers on flange face separ by 158ST steel studs & screw att—met beads on corners—joints fin or 1/16" veneer finish over base—UL Des X515 (f)		SA-923 4
W10 x49		THERMAFIBER Mineral Fireprfg—dbl layer 2" fireprfg around col att with stud welding pins or 12-ga. flange clips & clinch shields 16" o.c.—UL Des X306 (f)	Dry assembly; offers excellent insulation for exterior columns	SA-707 5
2-hour rated applications				
W14 x228		Gypsum Drywall or Veneer Finish Fireprfg—1 layer 1/2" SHEETROCK brand FIRECODE "C" panels or 1/2" IMPERIAL FIRECODE "C" gypsum base around col— panels screw att to 158ST steel studs at col corners—met corner beads—joints fin or 1/16" veneer finish over base— UL Des X521 (f)		SA-923 6
W10 x49		Gypsum Drywall or Veneer Finish Fireprfg—2 layers 1/2" SHEETROCK brand FIRECODE "C" panels or 1/2" IMPERIAL FIRECODE "C" gypsum base around col— double layer over ea flange end—double layer on flange faces separ by 158ST steel studs & screw att—met beads on corners—joints or 1/16" veneer finish over base— UL Des X518 (f)		SA-923 7
Varies		Gypsum Drywall or Veneer Finish Fireprfg—3 layers 1/2" SHEETROCK brand FIRECODE "C" panels or 1/2" IMPERIAL FIRECODE "C" gypsum base around col— triple layer over ea flange end—inner layers on flange face separ by 158ST steel studs & screw att—met beads on corners—joints fin or 1/16" veneer finish over base— UL Des X524 (f)	Rating applies to tapered or constant section prefabricated metal building columns	SA-923 8
W10 x49		THERMAFIBER Mineral Fireprfg—2 1/2" fireprfg around col att with stud welding pins or 12-ga. flange clips & clinch shields 24" o.c.—UL Des X305 (f)	Dry assembly; offers excellent thermal insulation for exterior columns	SA-707 9

(For other tested fireproofing assemblies, see U.S.G. Technical Bulletin: CS-6 Metal-Framed Metal Lath and Plaster Systems)

fire rating	beam type	physical data	construction detail	description & test no.	comments	folder reference
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beam fireproofing

3 hr. (beam only)	W8 X24		Gypsum Drywall or Veneer Finish Caged Beam Fireprfg—1 1/8" USG stl run chan brackets 24" o.c.—7/8 x 1 1/8" corner angles att to brackets—3 layers 5/8" SHEETROCK brand FIRECODE gypsum panels or IMPERIAL FIRECODE gypsum base att with Type S screws—1" 20-ga. hex mesh on bottom over middle layer—met beads on corners—joints fin or 1/16" veneer finish over base—2 1/2" conc deck on fluted stl flr—UL Des N505 (f)	Extends drywall and veneer finish use to beam protection. Fire rating for restrained assembly; 2-hr. rating for unrestrained assembly	SA-912 SA-923	10
3 hr.	W8 X24		THERMAFIBER Mineral Fireprfg—dbl layer 2" fireprfg around beam att with stud welding pins or 12-ga. flange clips & clinch shields 12" o.c.—2 1/2" conc deck on cellular stl flr—UL Des N304 (f)	Fire rating for restrained beam; unrestrained beam rating is 2 hr.	SA-707	11
2 hr. (beam only)	W8 X24		Gypsum Drywall or Veneer Finish Caged Beam Fireprfg—1 1/8" USG stl run chan brackets 24" o.c.—1 1/8" x 1 1/8" corner angles att to chan brackets—dbl layer 5/8" SHEETROCK brand FIRECODE gypsum panels or IMPERIAL FIRECODE gypsum base att with Type S screws—met beads on corners—joints fin or 1/16" veneer finish over base—2 1/2" conc deck on fluted stl flr—UL Des N501 (f)—UL Des N502 (f)	Design N502 based on 1 1/8" steel runner for corner angles & coped brackets	SA-912 SA-923	12
2 hr.	W8 X13		THERMAFIBER Mineral Fireprfg—dbl layer 2" fireprfg around beam att with stud welding pins or 12-ga. flange clips & clinch shields 16" o.c.—3 1/4" conc on fluted steel flr—UL Des D915 (f)	Fire rating is 1 1/2 hr. with cellular steel floor units	SA-707	13
2 hr.	W8 X24		THERMAFIBER Mineral Fireprfg—2" fireprfg around beam att with stud welding pins or 12-ga. flange clips & clinch shields 12" o.c.—2 1/2" conc on fluted stl flr—UL Des N304 (f)—UL Des N305 (f)	Fire rating is 1 1/2 hr. with cellular steel floor units	SA-707	14

trench header duct

3 hr.	W6 X12		THERMAFIBER Mineral Fireprfg—1" fireprfg, 8.25 pcf, under flr deck and trench header—dbl layer 1 1/2" SHEETROCK brand FIRECODE "C" gypsum panels under trench header—triple layer 3" fireprfg around beam—fireprfg and panels att with stud welding pins & clinch shields—2 1/2" conc on fluted stl flr—UL Des D301 (f)	Includes 4-hr. beam. Fire rating 2 hr. (beam 3-hr.) with 6.50-pcf min. fireprfg—UL Des D302	SA-707	15
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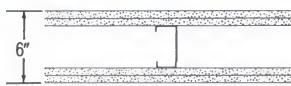
physical data
construction detail

description & test no.

comments

folder
reference

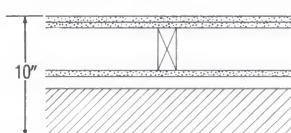
2-hour rated assemblies



Dbl layer $\frac{5}{8}$ " FIRECODE gypsum sheathing exterior—USG 35SJ20 studs 24" o.c.—dbl layer $\frac{5}{8}$ " SHEETROCK brand FIRECODE gypsum panel interior—base layer att with 1" Type S-12 screws 12" o.c.—face layer att. with 1 $\frac{1}{2}$ " Type S-12 screws 12" o.c.—load bearing up to 80% allowable stud axial load—UL Des U425

SA-510

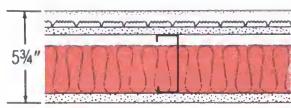
1



Wd Stud—2 layers $\frac{5}{8}$ " SHEETROCK brand FIRECODE gypsum panel interior— $\frac{1}{2}$ " gypsum sheathing and 4" brick masonry veneer exterior—2 x 4 16" o.c.—sheathing appl horiz with 11d galv nails 6" o.c.—gypsum panels appl horiz or vert with nails 8" o.c.—joints stag & fin—UL Des U302

SA-924

2

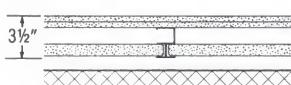


USG Exterior Curtain Wall—USG 358CWS steel studs 16" o.c.— $\frac{1}{2}$ " gypsum sheathing—self-furring metal lath—1" cement-lime-stucco exterior—3" THERMAFIBER M-S blankets betw studs— $\frac{5}{8}$ " Foil-Back SHEETROCK brand FIRECODE "C" gypsum panels or IMPERIAL FIRECODE "C" gypsum base and $\frac{1}{16}$ " veneer finish interior—T-4851-OSU (f)

Systems offer wide selection of exterior and interior surfaces, utilizing conventional materials (1)

SA-805

3



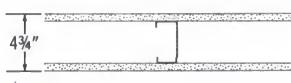
USG Exterior Curtain Wall—1" USG liner panels set betw USG steel C-H studs 24" o.c. on exterior—2 layers SHEETROCK brand FIRECODE "C" gypsum panels screw att on interior—joints fin—U of C 4-2-75

Rating also applies with IMPERIAL FIRECODE "C" Base and veneer finish interior

SA-805

4

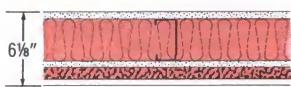
1-hour rated assemblies



$\frac{5}{8}$ " FIRECODE gypsum sheathing exterior—USG 35SJ20 studs 24" o.c.— $\frac{5}{8}$ " SHEETROCK brand FIRECODE gypsum panel interior—panels appl vert & att with 1" Type S-12 screws 12" o.c.—load bearing up to 100% allowable stud axial load—UL Des U425

SA-510

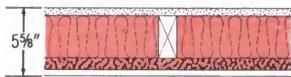
5



USG 35SJ20 studs 24" o.c.— $\frac{1}{2}$ " gypsum sheathing—1" FOAMULAR polystyrene insul installed horiz— $\frac{1}{2}$ " cedar plywood exterior—3" THERMAFIBER M-S blks betw studs— $\frac{5}{8}$ " SHEETROCK brand FIRECODE "C" gypsum panel interior—joints fin—CEG 11-9-79

SA-710
SA-805

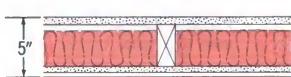
6



Wd. Stud— $\frac{5}{8}$ " SHEETROCK brand FIRECODE "C" gypsum panel interior—1" FOAMULAR polystyrene insul sheathing and $\frac{1}{2}$ " plywd siding—2 x 4 16" o.c.—3" THERMAFIBER W-S blks—sheathing appl horiz with 1 $\frac{1}{2}$ " galv nails 12" o.c.—gypsum panels appl vert with 6d cem ctd nails 7" o.c.—joints fin—CEG 12-5-79—WHI-495-0379

SA-710
SA-804

7



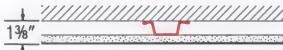
Wd Stud— $\frac{5}{8}$ " SHEETROCK brand FIRECODE gypsum panel interior— $\frac{1}{2}$ " gypsum sheathing and $\frac{5}{8}$ " min shingle exterior—2 x 4 16" o.c.—3" glass fiber insul blks—sheathing appl horiz with 6d nails 8" o.c.—gypsum panels appl vert with 6d nails 7" o.c.—joints fin—UL Des U014

Rating also applies with IMPERIAL FIRECODE "C" Base and veneer finish interior surface

SA-924

8

(1) For data on truss-type framing used with these systems, see U.S.G. Technical Bulletin PM-149 on "TRUSSTEEL Stud Curtain Wall Systems."

physical data construction detail	description	comments	folder reference
drywall assemblies			
	USG Metal Furring Channels 24" o.c., 1/2" Foil-Back SHEETROCK brand Gypsum Panels screw attached, U.S.G. Joint Treatment	Good vapor retarder; no limiting height	SA-923 1
	Wood furring strips 16" o.c., 1/2" Foil-Back SHEETROCK brand Gypsum Panels, U.S.G. Joint Treatment	Surface not isolated from structural stresses; good vapor retarder	SA-924 2
	USG Z-Furring Channels appl vert 24" o.c., 1" THERMAFIBER Z-Furring insulation betw chan, 1/2" Foil-Back SHEETROCK brand Gypsum Panels screw attached to channels, U.S.G. Joint Treatment	Suitable for up to 3" thick insulation; noncombustible; good vapor retarder; no limiting height	SA-923 SA-924 3
	USG Steel Studs 24" o.c., 1/2" Foil-Back SHEETROCK brand Gypsum Panels screw attached, U.S.G. Joint Treatment	Free standing for pipe chase clearance; good vapor retarder	SA-923 4
	USG Z-Furring Channels appl vert 24" o.c., FOAMULAR Extruded Polystyrene Insulation betw chan, 1/2" Foil-Back SHEETROCK brand Gypsum Panels appl vert and screw-attached to channels, U.S.G. Joint Treatment	Suitable for up to 3" thick insulation; no limiting height	SA-710 SA-923 5
	STL-369 Furring Spline appl vert 24" o.c., kerfed ULTRAWALL Gypsum Panels engage concealed spline	Provides exterior wall surfacing having same appearance as movable partitions	SA-1020 6
plastered assemblies			
	USG Metal Furring Channels 16" o.c., 1/2" Foil-Back IMPERIAL Gypsum Base screw-attached to channels, 1/16" veneer finish	Good vapor retarder; no limiting height	SA-912 7
	USG Steel Studs 16" o.c. set in runners, 1/2" Foil-Back IMPERIAL Gypsum Base screw-attached to studs, 1/16" veneer finish	Free-standing; allows for pipe chase clearance; good vapor retarder. Also suitable for ROCKLATH Base and conv. plaster interior	SA-912 SA-915 8
	USG Z-Furring Channels appl vert 24" o.c., THERMAFIBER Z-Furring Insulation betw chan, 1/2" Foil-Back IMPERIAL Gypsum Base screw-attached to channels, 1/16" veneer finish	Noncombustible; good vapor retarder; no limiting height. Also suitable for ROCKLATH Base and conv. plaster interior	SA-912 SA-915 9
	USG Z-Furring Channels appl vert 24" o.c., FOAMULAR Extruded Polystyrene Insulation betw chan, 1/2" Foil-Back IMPERIAL Gypsum Base screw-attached to channels, 1/16" veneer finish	Suitable for up to 3" thick insulation, no limiting height. Also suitable for ROCKLATH Base and conv. plaster interior	SA-710 SA-912 SA-915 10
	TRUSSTEEL Studs 16" o.c. cross braced 4' o.c. on back chord, 3/8" Foil-Backed ROCKLATH Plaster Base attached with TL-1 Clips, 1/2" sanded basecoat plaster, 1/16" lime putty finish	Free standing; allows for pipe chase clearance; good vapor retarder	SA-915 11

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